

REMARKS

The Office Action of June 6, 2003 presents the examination of claims 17-34. All of these claims are canceled in this paper, and are replaced by new claims 35-54.

Support for the new claims

Claims 35-36 are supported generally by the working Example 1. The obtaining of tissues for transformation is also described at page 10 of the specification. The use of an explant from a monocot plant is supported at page 10, lines 14 and 21. The more specific limitations in claim 37 are supported at page 18, line 25 -30 and Table 1 (treated); those of claim 38 at (page 19, lines 1-4 and Table 1 (treated)) and those of claim 39 at (page 19, lines 21 ff. and Table 1(treated)). The remaining claims recite limitations of the previously pending claims 17-34 for which support has not been disputed by the Examiner.

Substitute Specification

The Examiner has objected to Applicants' filing of a substitute specification with Applicants' paper of February 14, 2003, asserting that a statement that no new matter was added to the specification must accompany the substitute specification. The required statement can be found at page 8, lines 2-3, of the

Amendment filed February 14, 2003. Entry of the substitute specification into the application is requested.

"Dedifferentiating"

The Examiner had rejected previous claims 18-34 under 35 U.S.C. § 112, first paragraph, for alleged lack of written description of the term, "dedifferentiating". This term is not used in the presently pending claims, rendering this ground of rejection moot. However the claims are not amended to provide remedy to this ground of rejection. Support for the term "dedifferentiating" can be found in the specification, for example, at page 8, lines 14-16 ("during dedifferentiation") and page 10, lines 10-18 ("cultured tissue during dedifferentiation" and the definition thereof). Verbatim use of the word "dedifferentiating" in the specification is not required; Applicants submit that the skilled artisan would understand from the above text that a dedifferentiating tissue was being used in the described method.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 17-34 stand rejected under 35 U.S.C. § 112, second paragraph, for reasons set forth in detail in part 7 of the Office Action. Applicants believe that the present claims adequately address most of the instances of indefinite language

asserted by the Examiner. As to the remaining instances, the term "immature" is defined in the specification at page 11, lines 1-4; a "super binary vector" is defined at page 12, lines 12-19.

As to the term "gene", Applicants note that while this is not explicitly defined in the specification, the Examiner herself, at page 3 of the Office Action, provides a complete definition of the term. Applicants submit that such is all the evidence necessary to establish that one of ordinary skill in the art would also understand the meaning of the word, "gene". The term "gene" remains in the claims in a form deemed definite, e.g., "a *virG* gene". However, the term "foreign gene", the basis for the rejection, has now been dropped from the claims.

Rejection under 35 U.S.C. § 112, first paragraph

Previous claim 29 was rejected under 35 U.S.C. § 112, first paragraph, for alleged lack of enablement of the element of the plasmid pTOK162. This plasmid is recited in the present claim 49.

The Examiner maintains her position that a deposit of the plasmid pTOK162 is necessary for practice of the invention of claim 48. Applicants respectfully disagree.

First, the entire plasmid pTOK162 is not required for practice of the invention of claim 49; only the portion that includes the virulence genes is needed. Second, knowledge of

the sequence of pTOK162 is not necessary, merely a cloned DNA fragment encompassing the virulence genes of pTOK162 is needed.

A map of pTOK162 showing the virulence genes is shown in Figure 1 of the present application. This map, together with the publication of Komari et al., Exhibit 1 provide the information necessary for the skilled artisan to produce the invention described by claim 49 using readily available starting materials. The Examiner should note that the virulence region of pTOK162 is derived from the plasmid pTiBo542 (see the legend to Fig. 1 of Komari). The plasmid pTiBo542 in turn is harbored in the *A. tumefaciens* strain A281, which is described in the literature by Watson et al. in 1975 (see the first full paragraph in col. 2 of page 303 of Komari et al). Strain A281 is available from the American Type Culture Collection Global Bioresource Center under the accession number 53487.

Komari thus describes that the virulence region of pTOK162 is the 15.2 kbp KpnI fragment of the plasmid pTiBo542, which is obtainable from a publically available *A. tumefaciens* strain A281 as described by Watson et al. in 1975. No further deposit of any biological material is required to practice the present invention.

Rejections over prior art

Over Gould et al.

Claims 18-23, 25, 28 and 31-33 stand rejected under 102(b) as anticipated by Gould et al. The rejected claims have all been canceled, rendering the rejection moot. Applicants submit that the rejection does not apply to the now-pending claims.

In particular, Applicants note that Gould does not disclose any step of culturing the tissue to be transformed in a medium comprising an auxin compound prior to contacting of the tissue with *Agrobacterium* cells. To the contrary, Gould describes contacting freshly cut shoot apices with the *Agrobacterium* culture (see col. 1 on page 428). Thus, the presently-claimed invention is distinct from what is disclosed by Gould et al. and the instant rejection should not be applied to the present claims.

Over Graves

Claims 18-20, 23 and 25 stand rejected under 35 U.S.C. § 102(b) over Graves et al. The rejected claims are canceled herein, rendering the instant rejection moot. Applicants submit that the rejection is not applicable to the pending claims.

In particular, the claimed methods describe incubation of a plant tissue on a medium containing an auxin prior to contact of the tissue (or cells thereof) with *Agrobacterium* cells. On the other hand, Graves et al. only disclose germinating seeds on a

damp, sterile paper and then grinding them prior to contacting them with *Agrobacterium* cells. Thus, the presently-claimed invention is distinct from what is disclosed by Graves and the instant rejection should not be applied to the present claims.

Applicants wish to point out in passing that the Examiner has completely mischaracterized Gould and Graves, by asserting that they include any step of culturing a plant tissue before the tissue is contacted with *Agrobacterium* cells. Thus, the Examiner's comment that "any medium is a dedifferentiating medium" and her evidence to support this assertion are irrelevant. This clarifies that the present amendments to the claims are not made for purposes of overcoming these references as prior art, but merely to clarify the language of the claims.

Over Yu et al.

Claims 18-25, 27-28 and 31-34 stand rejected under 35 U.S.C. § 102(e) as anticipated by Yu et al. The rejected claims are canceled herein, rendering the rejection moot. Applicants submit that the rejection should not be applied to the present claims.

Applicants submit that the present claims find full support in the priority application JP 4-204464, through the parent application. Applicants note that the limitation urged by the Examiner as missing from the priority application and the parent

application that the step of culturing the plant tissue for from 1 to 6 days has been also removed from the instant claims. Accordingly, every limitation in the present claims finds support in the priority application and the instant rejection should not be applied to the present claims.

The present application well-describes and claims patentable subject matter. The favorable action of allowance of the pending claims and passage of the application to issue is respectfully requested.

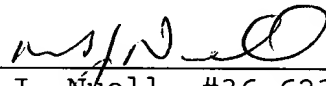
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark J. Nuell (Reg. No. 36,623) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a three (3) month extension of time for filing a response in connection with the present application. The required fee of \$950.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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By 
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Attachment: Exhibit 1 (Plant Cell Reports (1990) 9: 303-306)